

SUBSTITUTE SPECIFICATION

CLEAN COPY

Description

ROTATION SYSTEM WITH THREE DEGREES OF FREEDOM AND
APPLICATION OF THE SAME

This application is a National Stage Application, filed under 35 USC 371, of International (PCT) Application No. PCT/JP03/09058, filed July 16, 2003.

FIELD OF THE INVENTION

The present invention relates to a rotation system with three degrees of freedom, using at least three guide rails, wherein one of the guide rails and two other guide rails are installed on a base so as to be orthogonal to each other, an indication bar is installed on a rotor, and at least one slider is installed on the indication bar, which detect a direction of the rotor by rotating the guide rails, sliding along the guide rails, and rotate the rotor by rotating the guide rails by actuators.

BACKGROUND OF THE INVENTION

Many motors with three degrees of freedom like ones using a piezoelectric element (refer to Published Unexamined Japanese Patent Application No. S62-228392, Published Unexamined Japanese Patent Application No. H09-34409, Published Unexamined Japanese Patent Application No. H09-219980, Published Unexamined Japanese Patent Application No. H11-18459 and PCT Publication Number WO